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STUDY OF LOVE AND RAYLEIGH WAVES FROM EARTHQUAKES WITH FAULT PLANE SOLUTIONS OR WITH KNOWN FAULTING
Part 3. TABLE OF SOURCE PHASE DIFFERENCES BETWEEN RAYLEIGH AND LOVE WAVES

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ABSTRACT

The table of source phase differences between Rayleigh and Love waves which was described in Part 1 and used in Part 2 is presented in a concise form for the case of a surface focus.

Introduction

The source phases ϕ_R and ϕ_L of Rayleigh and Love waves as defined in equation 1 of Part 1 are computed for various fault systems on the assumption of the double couple and the modified single couple. The method of computation was described in detail in Part 1. We specify a fault motion by the following two parameters: (1) the difference between the azimuth φ_1 of the dip direction of the fault plane and φ_2 of the auxiliary plane, and (2) the dip angle δ_1 of the fault plane. The auxiliary plane is the plane normal to the direction of the fault motion, and is usually defined in the fault plane solutions given from initial motion data. The slip angle, which is the angle between fault strike and motion direction, may be computed from the above two parameters by equations 15 and 16 of Part 1.

For a fault with the above two parameters given, four types of motion are possible: left-lateral reverse, left-lateral normal, right-lateral reverse and right-lateral normal motion as schematically illustrated in figure 1. It can be shown that if we know the value of $\phi_R - \phi_L$ for one type of motion, we can derive the values for the other three types from it.

First, the value of $\phi_R - \phi_L$ is the same at any azimuth for right-lateral reverse motion and for left-lateral normal motion. This is because the two motions are identical except for the sense. The same can be said for right-lateral normal and left-lateral reverse motion.

Secondly, the value of $\phi_R - \phi_L$ at an azimuth θ for left-lateral reverse motion may be obtained from the value at $180° - \theta$ for right-lateral reverse motion, where θ is measured clockwise from the strike of fault as shown in figure 1. The relation between the two values may be expressed as

$(\phi_R - \phi_L)$ at θ for left-lateral reverse motion

$$= 0.5 + (\phi_R - \phi_L) \text{ at } 180° - \theta \text{ for right-lateral reverse motion.}$$

Similarly, we have the relation that

$(\phi_R - \phi_L)$ at θ for left-lateral normal motion

$$= 0.5 + (\phi_R - \phi_L) \text{ at } 180° - \theta \text{ for right-lateral normal motion.}$$

These relations hold for the double couple model as well as for the modified single couple model.

The proof of the above relations may be obtained by decomposing the force system into a vertical component f_V, a horizontal component in the strike direction f_{SH} and one in the dip direction f_{DH}. It can be shown that the transformations

$$f_V' = f_V$$

$$f_{DH}' = f_{DH}$$

$$f_{SH}' = -f_{SH}$$

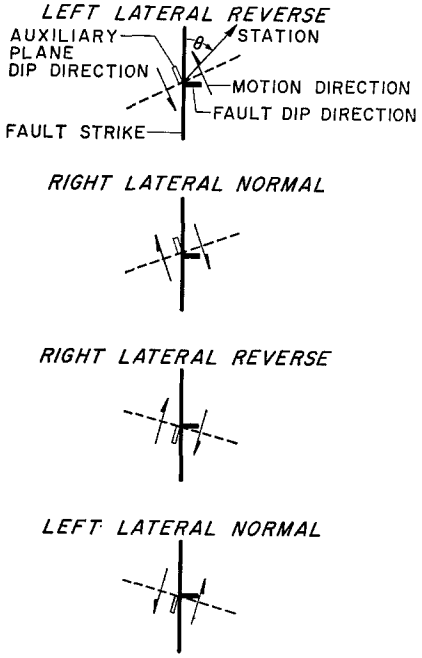

FIG. 1. Four types of motion on a fault with given two parameters; namely, dip direction difference between fault plane and auxiliary plane and dip angle of fault plane. The horizontal projection of the motion direction is indicated by pairs of arrows.

and

$$\theta' = 180° - \theta$$

will not change the phase ϕ_R of Rayleigh waves but will change the phase ϕ_L of Love waves by 0.5 circle for the single couple, double couple and modified single couple. (See, e.g., equations 57 and 61 of Haskell's (1963) paper.)

Thus, it is only necessary to show the values for one type of fault motion. In our table, the values are given for left-lateral reverse motion such as shown at the top of figure 1.

Further simplification comes from the fact that for a given fault motion the value of $\phi_R - \phi_L$ at an azimuth θ and that at $\theta + 180°$ are related. The relation may be

expressed as

$$\{(\phi_R - \phi_L) \quad \text{at} \quad \theta\} + \{(\phi_R - \phi_L) \quad \text{at} \quad \theta + 180°\} = 0$$

This relation holds also for the single couple, double couple and modified single couple model. The proof of this relation may be obtained from the expression for displacement of Rayleigh waves as given by equation 57 (for a single couple) or equation 61 (for a double couple) of Haskell's (1963) paper. The factor including the azimuthal angle in these equations shows a complex conjugate relation between azimuths θ and $\theta + 180°$. Since the same relation holds for Love waves, we get the relation for $\phi_R - \phi_L$ shown above. Thus, it is only necessary to give the values of $\phi_R - \phi_L$ for the azimuth from 0 to 180°.

The following tables give the values of $\phi_R - \phi_L$ in parts of a circle for left-lateral reverse motion with the following parameters: the dip angle of the fault (designated as *DIP* in the table) ranges from 1° to 89°, with the interval of 8°; the difference in the azimuth of dip direction between the fault plane and auxiliary plane varies from 90° to 180° with various intervals; the slip angle (designated as SLIP). The azimuth to the station (designated as AZM) is measured clockwise from the strike direction as shown at the top of figure 1. Note that the azimuths shown in the table lie in the dipping side of the fault.

The following tables give the values of $\phi_R - \phi_L$ corresponding to very shallow earthquakes. The depth is assumed as zero in the computation of ϕ_R, and the depth parameter for Love waves defined in Part 1 is taken as 0.1.

Examples

We shall show how to obtain the value of $\phi_R - \phi_L$ for a given fault motion from the tables by using the Kern County main shock and shock M3 of Part 2 as examples.

As described in Part 2, the fault motion associated with the Kern County earthquake is left-lateral reverse on a fault with strike direction N50°E and dip angle 63°. The fault dips toward south-east and the difference between the azimuth of dip direction of the fault plane and that of the auxiliary plane is 140°.

The azimuths to the European stations (table 6 of Part 2) are about N30°E from the epicenter, and are about 340° if measured from the fault strike in the way as shown in figure 1.

First, we look for the value of $\phi_R - \phi_L$ at the azimuth of 160° (= 340° − 180°) for the dip angle of 63° and the dip direction difference of 140°. We find from Table 10 that the corresponding value is −0.167 and −0.019 for the modified single couple and the double couple respectively. Then, from the conjugate relation described before, we get the value of 0.167 and 0.019 for the azimuth 340° for the two models.

The next example is shock M3, for which the fault parameters are given in table 2 of Part 2. The type of fault motion of this shock is illustrated in figure 2. If plane *a* is the actual fault, the motion is right-lateral normal, and if plane *b* is the actual fault, the motion is left-lateral normal.

As mentioned before, right-lateral normal motion gives the same value of $\phi_R - \phi_L$ as left-lateral reverse motion for which the tables show the values. The dip angle of plane *a* is 18°, the dip direction difference is 132°, and the azimuth to Pasadena

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 90.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.512	-0.594	-0.646	-0.677	-0.696	-0.710	-0.721	-0.730	-0.739	-0.748	-0.763	0.121
20		-0.506	-0.553	-0.595	-0.628	-0.656	-0.678	-0.697	-0.714	-0.731	-0.751	-0.782	0.061
30		-0.504	-0.539	-0.572	-0.603	-0.632	-0.658	-0.683	-0.708	-0.735	-0.768	-0.823	0.029
40		-0.504	-0.538	-0.571	-0.605	-0.639	-0.674	-0.711	-0.750	-0.795	0.151	0.086	0.010
50		-0.001	-0.013	-0.024	-0.035	-0.044	-0.052	-0.058	-0.060	-0.057	-0.047	-0.029	-0.003
60		-0.002	-0.017	-0.032	-0.047	-0.062	-0.077	-0.092	-0.104	-0.113	-0.113	-0.088	-0.013
70		-0.002	-0.016	-0.031	-0.046	-0.062	-0.078	-0.094	-0.110	-0.123	-0.130	-0.113	-0.019
80		-0.002	-0.016	-0.030	-0.045	-0.061	-0.077	-0.094	-0.110	-0.126	-0.135	-0.124	-0.023
90		0.257	0.281	0.299	0.315	0.326	0.334	0.337	0.338	0.338	0.341	0.362	0.475
100		0.498	0.484	0.469	0.454	0.439	0.423	0.406	0.389	0.374	0.364	0.376	0.477
110		0.498	0.483	0.469	0.453	0.438	0.422	0.406	0.390	0.377	0.370	0.387	0.481
120		0.498	0.483	0.468	0.453	0.438	0.423	0.408	0.396	0.387	0.387	0.412	0.487
130		0.499	0.487	0.476	0.465	0.456	0.448	0.442	0.440	0.443	0.453	0.471	0.497
140		-0.004	-0.038	-0.071	-0.105	-0.139	-0.174	-0.210	-0.250	-0.295	0.652	0.586	0.510
150		-0.004	-0.039	-0.072	-0.103	-0.132	-0.158	-0.183	-0.208	-0.235	-0.268	-0.322	0.529
160		-0.006	-0.053	-0.095	-0.128	-0.156	-0.178	-0.197	-0.214	-0.231	-0.251	-0.282	0.561
170		-0.012	-0.094	-0.146	-0.177	-0.196	-0.210	-0.221	-0.230	-0.239	-0.248	-0.263	0.621
180		-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250	-0.250
AZM					DOUBLE COUPLE								
10		-0.500	-0.500	-0.501	-0.501	-0.502	-0.503	-0.503	-0.505	-0.506	-0.510	-0.519	0.368
20		-0.500	-0.501	-0.502	-0.503	-0.505	-0.506	-0.508	-0.511	-0.515	-0.523	-0.544	0.309
30		-0.500	-0.503	-0.505	-0.507	-0.510	-0.514	-0.518	-0.524	-0.534	-0.550	-0.590	0.278
40		-0.501	-0.509	-0.518	-0.527	-0.538	-0.550	-0.564	-0.582	-0.607	0.360	0.314	0.258
50		0.001	0.011	0.021	0.032	0.044	0.058	0.075	0.095	0.121	0.154	0.195	0.245
60		0.000	0.004	0.008	0.013	0.018	0.024	0.031	0.042	0.057	0.082	0.132	0.236
70		0.000	0.003	0.006	0.009	0.013	0.017	0.022	0.030	0.041	0.061	0.105	0.230
80		0.000	0.003	0.005	0.008	0.011	0.015	0.019	0.026	0.035	0.053	0.094	0.230
90		0.282	0.287	0.305	0.320	0.331	0.338	0.341	0.342	0.341	0.343	0.364	0.475
100		0.500	0.503	0.505	0.508	0.511	0.514	0.519	0.525	0.535	0.552	0.592	0.717
110		0.500	0.503	0.506	0.509	0.513	0.517	0.522	0.530	0.541	0.560	0.604	0.724
120		0.500	0.504	0.508	0.513	0.518	0.524	0.531	0.541	0.556	0.582	0.632	0.731
130		0.501	0.511	0.521	0.532	0.544	0.558	0.575	0.595	0.621	0.653	0.695	0.741
140		-0.001	-0.009	-0.018	-0.027	-0.038	-0.050	-0.064	-0.082	-0.107	0.860	0.814	0.755
150		-0.000	-0.003	-0.005	-0.007	-0.010	-0.014	-0.018	-0.024	-0.034	-0.050	-0.090	0.775
160		-0.000	-0.001	-0.002	-0.003	-0.005	-0.006	-0.008	-0.011	-0.015	-0.023	-0.044	0.807
170		-0.000	-0.000	-0.001	-0.001	-0.002	-0.003	-0.003	-0.005	-0.006	-0.010	-0.019	0.866
180		-0.372	-0.264	-0.228	-0.214	-0.208	-0.206	-0.207	-0.211	-0.215	-0.221	-0.228	-0.235

TABLE 1

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 91.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	45.0	6.4	3.4	2.4	1.8	1.5	1.3	1.2	1.1	1.0	1.0	1.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.405	-0.586	-0.645	-0.677	-0.697	-0.711	-0.722	-0.731	-0.740	-0.749	-0.764	0.113
20		-0.397	-0.541	-0.590	-0.627	-0.655	-0.678	-0.697	-0.715	-0.732	-0.752	-0.784	0.058
30		-0.390	-0.525	-0.566	-0.600	-0.630	-0.658	-0.684	-0.709	-0.736	-0.770	-0.826	0.028
40		-0.380	-0.522	-0.565	-0.602	-0.639	-0.676	-0.714	-0.755	-0.800	0.146	0.082	0.009
50		0.137	0.007	-0.015	-0.029	-0.042	-0.051	-0.058	-0.062	-0.059	-0.050	-0.030	-0.004
60		0.156	0.009	-0.019	-0.039	-0.057	-0.074	-0.089	-0.103	-0.113	-0.113	-0.089	-0.013
70		0.183	0.023	-0.011	-0.034	-0.053	-0.072	-0.090	-0.107	-0.122	-0.129	-0.113	-0.019
80		0.216	0.061	0.011	-0.018	-0.042	-0.064	-0.084	-0.104	-0.122	-0.133	-0.122	-0.022
90		0.253	0.275	0.294	0.311	0.323	0.331	0.336	0.337	0.337	0.340	0.362	0.475
100		0.289	0.422	0.436	0.433	0.424	0.412	0.399	0.384	0.371	0.362	0.375	0.477
110		0.321	0.449	0.451	0.442	0.430	0.417	0.402	0.388	0.375	0.369	0.386	0.481
120		0.346	0.459	0.456	0.445	0.433	0.419	0.406	0.394	0.386	0.387	0.412	0.487
130		0.366	0.469	0.467	0.461	0.454	0.447	0.443	0.442	0.445	0.455	0.473	0.497
140		-0.123	-0.053	-0.078	-0.108	-0.139	-0.172	-0.208	-0.246	-0.290	0.657	0.590	0.510
150		-0.114	-0.052	-0.078	-0.106	-0.133	-0.158	-0.183	-0.207	-0.233	-0.265	-0.319	0.531
160		-0.108	-0.065	-0.099	-0.130	-0.156	-0.178	-0.196	-0.213	-0.230	-0.249	-0.280	0.564
170		-0.108	-0.102	-0.147	-0.176	-0.196	-0.210	-0.220	-0.229	-0.238	-0.247	-0.261	-0.370
180		-0.215	-0.246	-0.248	-0.249	-0.249	-0.249	-0.249	-0.249	-0.249	-0.249	-0.248	-0.234
AZM					DOUBLE COUPLE								
10		-0.483	-0.499	-0.500	-0.501	-0.502	-0.503	-0.504	-0.505	-0.507	-0.511	-0.521	0.359
20		-0.480	-0.499	-0.501	-0.503	-0.504	-0.506	-0.508	-0.511	-0.516	-0.525	-0.546	0.304
30		-0.472	-0.500	-0.504	-0.507	-0.510	-0.514	-0.519	-0.526	-0.535	-0.553	-0.594	0.275
40		-0.428	-0.502	-0.516	-0.528	-0.540	-0.554	-0.571	-0.591	-0.616	0.350	0.307	0.256
50		-0.051	0.004	0.017	0.028	0.040	0.053	0.069	0.089	0.114	0.147	0.191	0.242
60		-0.015	0.003	0.007	0.012	0.017	0.023	0.030	0.041	0.055	0.081	0.130	0.233
70		-0.007	0.002	0.006	0.009	0.012	0.017	0.022	0.029	0.041	0.060	0.104	0.227
80		-0.003	0.002	0.005	0.008	0.011	0.014	0.019	0.025	0.035	0.052	0.093	0.223
90		0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100		0.503	0.503	0.505	0.508	0.511	0.515	0.519	0.526	0.535	0.553	0.593	0.723
110		0.508	0.504	0.506	0.509	0.513	0.517	0.523	0.530	0.541	0.561	0.605	0.727
120		0.517	0.506	0.510	0.514	0.519	0.525	0.532	0.542	0.558	0.583	0.634	0.734
130		0.563	0.519	0.527	0.538	0.550	0.564	0.581	0.602	0.628	0.660	0.699	0.744
140		-0.062	-0.015	-0.020	-0.027	-0.035	-0.046	-0.059	-0.075	-0.098	0.869	0.821	0.758
150		-0.027	-0.005	-0.006	-0.008	-0.010	-0.014	-0.018	-0.023	-0.032	-0.048	-0.086	0.778
160		-0.009	-0.003	-0.003	-0.004	-0.005	-0.006	-0.008	-0.011	-0.014	-0.022	-0.041	0.811
170		-0.017	-0.002	-0.002	-0.002	-0.002	-0.003	-0.003	-0.004	-0.006	-0.009	-0.017	-0.124
180		-0.316	-0.002	-0.001	-0.001	-0.002	-0.002	-0.002	-0.003	-0.003	-0.005	-0.009	-0.068

TABLE 2

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 92.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	63.5	12.6	6.8	4.7	3.7	3.0	2.6	2.4	2.2	2.1	2.0	2.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.345	-0.577	-0.643	-0.677	-0.698	-0.712	-0.723	-0.732	-0.741	-0.750	-0.766	0.106
20		-0.341	-0.528	-0.585	-0.625	-0.655	-0.678	-0.698	-0.716	-0.733	-0.753	-0.787	0.055
30		-0.334	-0.509	-0.559	-0.597	-0.629	-0.657	-0.684	-0.710	-0.738	-0.772	-0.829	0.027
40		-0.327	-0.505	-0.558	-0.600	-0.639	-0.678	-0.717	-0.759	-0.806	0.141	0.078	0.009
50		0.187	0.028	-0.005	-0.024	-0.039	-0.050	-0.059	-0.063	-0.061	-0.052	-0.032	-0.004
60		0.200	0.037	-0.004	-0.030	-0.051	-0.070	-0.087	-0.101	-0.112	-0.112	-0.089	-0.013
70		0.216	0.062	0.011	-0.019	-0.043	-0.065	-0.085	-0.104	-0.120	-0.128	-0.112	-0.019
80		0.234	0.125	0.058	0.015	-0.018	-0.047	-0.072	-0.096	-0.116	-0.130	-0.121	-0.022
90		0.253	0.275	0.294	0.311	0.323	0.331	0.336	0.337	0.337	0.340	0.362	0.475
100		0.271	0.382	0.411	0.416	0.412	0.404	0.393	0.380	0.368	0.361	0.374	0.477
110		0.289	0.421	0.435	0.432	0.423	0.412	0.399	0.385	0.373	0.368	0.386	0.481
120		0.305	0.438	0.445	0.438	0.428	0.416	0.404	0.393	0.385	0.387	0.412	0.487
130		0.318	0.452	0.459	0.457	0.452	0.447	0.444	0.443	0.448	0.458	0.475	0.497
140		-0.173	-0.067	-0.084	-0.110	-0.140	-0.171	-0.205	-0.242	-0.285	0.662	0.594	0.511
150		-0.165	-0.065	-0.083	-0.109	-0.134	-0.159	-0.182	-0.206	-0.232	-0.263	-0.316	0.532
160		-0.160	-0.075	-0.103	-0.132	-0.156	-0.178	-0.196	-0.213	-0.229	-0.248	-0.277	0.567
170		-0.157	-0.109	-0.148	-0.176	-0.195	-0.209	-0.220	-0.229	-0.237	-0.246	-0.259	-0.361
180		-0.182	-0.242	-0.246	-0.247	-0.248	-0.248	-0.248	-0.248	-0.248	-0.248	-0.246	-0.219
AZM					DOUBLE COUPLE								
10		-0.467	-0.497	-0.499	-0.500	-0.501	-0.502	-0.504	-0.505	-0.508	-0.512	-0.523	0.352
20		-0.461	-0.497	-0.500	-0.502	-0.504	-0.506	-0.509	-0.512	-0.517	-0.526	-0.549	0.301
30		-0.444	-0.496	-0.502	-0.506	-0.510	-0.514	-0.520	-0.527	-0.537	-0.556	-0.599	0.273
40		-0.368	-0.493	-0.513	-0.529	-0.544	-0.560	-0.578	-0.600	0.373	0.340	0.301	0.255
50		-0.087	-0.001	0.013	0.024	0.036	0.049	0.064	0.083	0.108	0.142	0.187	0.242
60		-0.029	0.001	0.006	0.011	0.016	0.022	0.030	0.040	0.054	0.079	0.129	0.233
70		-0.014	0.002	0.005	0.008	0.012	0.016	0.022	0.029	0.040	0.060	0.104	0.227
80		-0.006	0.002	0.005	0.007	0.011	0.014	0.019	0.025	0.035	0.052	0.092	0.223
90		0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100		0.506	0.508	0.505	0.508	0.511	0.515	0.519	0.526	0.535	0.553	0.593	0.723
110		0.515	0.505	0.507	0.510	0.513	0.517	0.523	0.530	0.542	0.562	0.606	0.727
120		0.534	0.508	0.511	0.515	0.519	0.525	0.533	0.544	0.559	0.585	0.635	0.734
130		0.620	0.529	0.534	0.544	0.557	0.572	0.589	0.611	0.636	0.667	0.704	0.744
140		-0.102	-0.020	-0.021	-0.026	-0.033	-0.042	-0.054	-0.069	-0.091	-0.123	0.828	0.759
150		-0.050	-0.008	-0.007	-0.009	-0.011	-0.013	-0.017	-0.022	-0.030	-0.045	-0.081	0.780
160		-0.037	-0.005	-0.004	-0.004	-0.005	-0.006	-0.008	-0.010	-0.014	-0.021	-0.039	0.815
170		-0.033	-0.004	-0.003	-0.002	-0.002	-0.003	-0.003	-0.004	-0.005	-0.008	-0.015	-0.114
180		-0.032	-0.004	-0.002	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.001	-0.002	-0.015

TABLE 3

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 93.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	71.6	18.5	10.2	7.1	5.5	4.6	4.0	3.6	3.3	3.1	3.0	3.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.316	-0.567	-0.642	-0.677	-0.698	-0.712	-0.723	-0.733	-0.742	-0.752	-0.768	0.100
20		-0.313	-0.514	-0.580	-0.623	-0.654	-0.678	-0.698	-0.716	-0.734	-0.755	-0.789	0.053
30		-0.309	-0.494	-0.552	-0.593	-0.627	-0.657	-0.684	-0.711	-0.739	-0.774	-0.832	0.026
40		-0.303	-0.488	-0.550	-0.597	-0.639	-0.680	-0.721	-0.764	-0.812	0.135	0.075	0.008
50		0.208	0.049	0.006	-0.018	-0.035	-0.049	-0.059	-0.064	-0.063	-0.054	-0.033	-0.004
60		0.217	0.063	0.011	-0.020	-0.044	-0.065	-0.084	-0.100	-0.111	-0.112	-0.089	-0.013
70		0.228	0.097	0.035	-0.003	-0.032	-0.057	-0.080	-0.100	-0.117	-0.126	-0.112	-0.019
80		0.240	0.166	0.103	0.052	0.011	-0.025	-0.056	-0.085	-0.109	-0.125	-0.119	-0.022
90		0.253	0.275	0.294	0.311	0.323	0.331	0.336	0.337	0.337	0.340	0.362	0.475
100		0.265	0.357	0.393	0.403	0.403	0.397	0.387	0.376	0.365	0.359	0.374	0.477
110		0.277	0.398	0.422	0.423	0.417	0.407	0.395	0.383	0.372	0.368	0.386	0.481
120		0.288	0.419	0.435	0.432	0.424	0.413	0.402	0.392	0.385	0.387	0.412	0.487
130		0.298	0.437	0.452	0.453	0.450	0.447	0.445	0.446	0.450	0.460	0.476	0.497
140		-0.196	-0.080	-0.090	-0.113	-0.140	-0.170	-0.202	-0.238	-0.281	-0.333	0.599	0.512
150		-0.189	-0.076	-0.089	-0.111	-0.135	-0.159	-0.182	-0.205	-0.230	-0.261	-0.313	0.533
160		-0.185	-0.085	-0.107	-0.133	-0.157	-0.177	-0.195	-0.212	-0.228	-0.247	-0.275	0.571
170		-0.182	-0.115	-0.150	-0.176	-0.195	-0.208	-0.219	-0.228	-0.236	-0.245	-0.257	-0.350
180		-0.155	-0.238	-0.244	-0.246	-0.247	-0.247	-0.247	-0.247	-0.247	-0.247	-0.244	-0.204
AZM					DOUBLE COUPLE								
10		-0.451	-0.495	-0.498	-0.500	-0.501	-0.502	-0.504	-0.506	-0.508	-0.513	-0.525	0.345
20		-0.442	-0.495	-0.499	-0.502	-0.504	-0.506	-0.509	-0.512	-0.518	-0.527	-0.552	0.299
30		-0.418	-0.493	-0.501	-0.506	-0.510	-0.515	-0.520	-0.528	-0.539	-0.559	-0.603	0.272
40		-0.328	-0.481	-0.510	-0.530	-0.548	-0.567	-0.588	-0.611	0.362	0.330	0.294	0.254
50		-0.112	-0.006	0.009	0.021	0.033	0.045	0.060	0.078	0.103	0.136	0.183	0.241
60		-0.042	-0.001	0.005	0.010	0.016	0.022	0.029	0.039	0.053	0.078	0.127	0.232
70		-0.020	0.001	0.005	0.008	0.012	0.016	0.021	0.029	0.040	0.059	0.103	0.226
80		-0.009	0.002	0.005	0.007	0.010	0.014	0.019	0.025	0.035	0.052	0.092	0.223
90		0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100		0.509	0.504	0.506	0.508	0.511	0.515	0.519	0.526	0.536	0.553	0.594	0.723
110		0.523	0.506	0.507	0.510	0.514	0.518	0.523	0.531	0.542	0.562	0.607	0.727
120		0.551	0.510	0.512	0.516	0.520	0.526	0.534	0.545	0.560	0.587	0.637	0.734
130		0.661	0.542	0.543	0.552	0.565	0.580	0.599	0.620	0.646	0.675	0.709	0.745
140		0.873	-0.024	-0.022	-0.026	-0.032	-0.039	-0.050	-0.064	-0.084	-0.115	0.835	0.760
150		-0.071	-0.010	-0.008	-0.009	-0.011	-0.013	-0.016	-0.021	-0.029	-0.043	-0.077	0.782
160		-0.054	-0.007	-0.005	-0.005	-0.005	-0.006	-0.008	-0.010	-0.013	-0.019	-0.036	0.819
170		-0.048	-0.006	-0.003	-0.003	-0.003	-0.003	-0.003	-0.004	-0.005	-0.007	-0.013	-0.103
180		-0.047	-0.005	-0.003	-0.002	-0.001	-0.001	-0.000	-0.000	0.000	0.001	0.002	0.015

TABLE 4

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 95.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	78.7	29.2	16.7	11.7	9.1	7.6	6.6	6.0	5.5	5.2	5.1	5.0
AZM	MODIFIED SINGLE COUPLE											
10	-0.289	-0.543	-0.639	-0.678	-0.700	-0.714	-0.725	-0.734	-0.743	-0.754	-0.772	0.089
20	-0.288	-0.484	-0.569	-0.619	-0.653	-0.679	-0.700	-0.718	-0.736	-0.758	-0.794	0.048
30	-0.285	-0.462	-0.537	-0.586	-0.624	-0.656	-0.685	-0.713	-0.742	-0.779	-0.839	0.024
40	-0.282	-0.455	-0.535	-0.591	-0.640	-0.685	-0.730	-0.776	0.176	0.124	0.067	0.008
50	0.226	0.088	0.030	-0.004	-0.027	-0.045	-0.058	-0.065	-0.066	-0.057	-0.036	-0.004
60	0.231	0.110	0.043	0.002	-0.029	-0.055	-0.077	-0.096	-0.109	-0.111	-0.089	-0.013
70	0.238	0.149	0.082	0.033	-0.006	-0.038	-0.066	-0.091	-0.112	-0.123	-0.110	-0.019
80	0.245	0.207	0.168	0.127	0.083	0.038	-0.007	-0.049	-0.086	-0.112	-0.112	-0.021
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.260	0.330	0.368	0.384	0.388	0.386	0.379	0.371	0.362	0.357	0.373	0.477
110	0.267	0.367	0.400	0.408	0.407	0.400	0.390	0.379	0.370	0.366	0.385	0.481
120	0.274	0.391	0.417	0.421	0.416	0.408	0.399	0.390	0.384	0.387	0.413	0.488
130	0.281	0.412	0.440	0.447	0.449	0.449	0.449	0.451	0.457	0.466	0.480	0.498
140	-0.216	-0.102	-0.100	-0.117	-0.141	-0.168	-0.198	-0.232	-0.272	-0.323	0.607	0.513
150	-0.212	-0.096	-0.098	-0.116	-0.137	-0.159	-0.181	-0.204	-0.228	-0.257	-0.306	0.537
160	-0.208	-0.102	-0.114	-0.136	-0.157	-0.177	-0.194	-0.211	-0.226	-0.244	-0.270	0.579
170	-0.206	-0.125	-0.151	-0.176	-0.193	-0.207	-0.217	-0.226	-0.234	-0.242	-0.253	-0.326
180	-0.115	-0.230	-0.239	-0.243	-0.244	-0.245	-0.246	-0.246	-0.246	-0.244	-0.241	-0.176
AZM	DOUBLE COUPLE											
10	-0.421	-0.491	-0.496	-0.499	-0.501	-0.502	-0.504	-0.506	-0.509	-0.515	-0.529	0.333
20	-0.407	-0.490	-0.497	-0.501	-0.503	-0.506	-0.509	-0.513	-0.520	-0.530	-0.557	0.293
30	-0.373	-0.486	-0.497	-0.504	-0.510	-0.515	-0.522	-0.531	-0.544	-0.566	-0.613	0.269
40	-0.286	-0.446	-0.500	-0.534	-0.562	-0.588	-0.614	0.361	0.334	0.308	0.281	0.252
50	-0.142	-0.014	0.004	0.016	0.027	0.039	0.053	0.070	0.094	0.127	0.176	0.240
60	-0.065	-0.004	0.004	0.009	0.014	0.020	0.028	0.037	0.051	0.076	0.125	0.232
70	-0.033	-0.001	0.004	0.007	0.011	0.016	0.021	0.028	0.039	0.058	0.102	0.226
80	-0.015	0.001	0.004	0.007	0.010	0.014	0.019	0.025	0.034	0.052	0.092	0.222
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.516	0.504	0.506	0.508	0.511	0.515	0.520	0.526	0.536	0.553	0.594	0.724
110	0.538	0.507	0.508	0.511	0.514	0.518	0.524	0.531	0.543	0.563	0.608	0.728
120	0.585	0.515	0.515	0.517	0.522	0.528	0.536	0.547	0.563	0.590	0.641	0.735
130	0.708	0.578	0.568	0.576	0.589	0.605	0.624	0.645	0.668	0.693	0.719	0.746
140	0.845	-0.031	-0.024	-0.015	-0.029	-0.035	-0.043	-0.055	-0.072	-0.101	0.848	0.762
150	-0.103	-0.015	-0.010	-0.010	-0.011	-0.013	-0.015	-0.019	-0.026	-0.038	-0.070	0.786
160	-0.083	-0.011	-0.007	-0.006	-0.006	-0.006	-0.007	-0.009	-0.012	-0.017	-0.032	0.829
170	-0.075	-0.009	-0.005	-0.004	-0.003	-0.003	-0.003	-0.004	-0.005	-0.010	-0.019	0.879
180	-0.074	-0.009	-0.004	-0.003	-0.001	-0.001	-0.000	0.001	0.002	0.003	0.006	0.055

TABLE 5

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 100.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	84.3	48.4	31.1	22.6	17.9	15.0	13.2	11.9	11.0	10.4	10.1	10.0
AZM	MODIFIED SINGLE COUPLE											
10	-0.267	-0.466	-0.628	-0.679	-0.703	-0.718	-0.729	-0.739	-0.748	-0.760	-0.783	0.069
20	-0.268	-0.412	-0.533	-0.606	-0.650	-0.680	-0.702	-0.722	-0.742	-0.765	-0.807	0.039
30	-0.267	-0.393	-0.492	-0.563	-0.614	-0.654	-0.688	-0.719	-0.752	-0.792	-0.856	0.020
40	-0.267	-0.393	-0.497	-0.580	-0.648	-0.708	0.238	0.189	0.141	0.095	0.050	0.006
50	0.239	0.159	0.092	0.040	0.000	-0.030	-0.052	-0.066	-0.071	-0.064	-0.042	-0.005
60	0.242	0.180	0.121	0.067	0.020	-0.020	-0.054	-0.081	-0.100	-0.107	-0.088	-0.013
70	0.245	0.209	0.170	0.129	0.084	0.037	-0.010	-0.052	-0.087	-0.109	-0.104	-0.018
80	0.249	0.242	0.234	0.226	0.216	0.206	0.194	0.181	0.165	0.149	0.148	0.231
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.257	0.305	0.338	0.358	0.367	0.370	0.367	0.362	0.355	0.353	0.371	0.477
110	0.260	0.329	0.367	0.383	0.388	0.386	0.380	0.372	0.365	0.364	0.384	0.481
120	0.264	0.349	0.386	0.399	0.401	0.398	0.392	0.386	0.382	0.387	0.414	0.488
130	0.268	0.376	0.422	0.443	0.455	0.462	0.468	0.474	0.479	0.485	0.492	0.499
140	-0.232	-0.139	-0.121	-0.127	-0.143	-0.165	-0.190	-0.219	-0.254	-0.300	0.630	0.517
150	-0.230	-0.132	-0.118	-0.126	-0.142	-0.160	-0.180	-0.200	-0.222	-0.248	-0.291	0.547
160	-0.228	-0.133	-0.128	-0.142	-0.159	-0.176	-0.192	-0.207	-0.222	-0.238	-0.259	0.610
170	-0.225	-0.144	-0.156	-0.175	-0.191	-0.203	-0.214	-0.222	-0.230	-0.237	-0.243	-0.249
180	-0.065	-0.210	-0.228	-0.235	-0.238	-0.240	-0.241	-0.242	-0.241	-0.239	-0.231	-0.124
AZM	DOUBLE COUPLE											
10	-0.365	-0.481	-0.492	-0.496	-0.499	-0.502	-0.505	-0.508	-0.512	-0.520	-0.539	0.311
20	-0.346	-0.477	-0.491	-0.497	-0.502	-0.506	-0.511	-0.516	-0.525	-0.539	-0.572	0.283
30	-0.310	-0.461	-0.486	-0.499	-0.509	-0.518	-0.528	-0.541	-0.558	-0.586	0.362	0.263
40	-0.250	-0.250	-0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.249
50	-0.172	-0.026	-0.005	0.008	0.018	0.029	0.041	0.056	0.077	0.109	0.161	0.238
60	-0.105	-0.010	0.000	0.006	0.012	0.018	0.025	0.034	0.047	0.070	0.118	0.230
70	-0.060	-0.004	0.002	0.006	0.010	0.014	0.020	0.027	0.038	0.056	0.099	0.225
80	0.474	0.500	0.503	0.507	0.510	0.513	0.518	0.524	0.534	0.551	0.591	0.723
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.532	0.506	0.507	0.509	0.512	0.516	0.520	0.527	0.537	0.554	0.596	0.724
110	0.578	0.513	0.511	0.513	0.516	0.520	0.526	0.533	0.545	0.566	0.612	0.729
120	0.654	0.531	0.524	0.525	0.529	0.535	0.543	0.555	0.573	0.601	0.652	0.737
130	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.749
140	0.817	-0.042	-0.027	-0.024	-0.024	-0.027	-0.032	-0.039	-0.051	-0.073	-0.119	0.768
150	0.852	-0.025	-0.015	-0.012	-0.011	-0.012	-0.013	-0.015	-0.020	-0.029	-0.052	0.799
160	0.869	-0.019	-0.011	-0.008	-0.007	-0.006	-0.006	-0.007	-0.008	-0.011	-0.021	0.863
170	0.125	-0.017	-0.009	-0.006	-0.004	-0.003	-0.002	-0.002	-0.001	-0.001	-0.001	-0.002
180	0.874	-0.017	-0.008	-0.005	-0.003	-0.001	0.001	0.002	0.004	0.008	0.016	0.116

TABLE 6

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 110.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	87.3	66.7	51.2	40.7	33.8	29.0	25.7	23.5	21.9	20.8	20.2	20.0

MODIFIED SINGLE COUPLE

AZM												
10	-0.256	-0.333	-0.580	-0.683	-0.712	-0.728	-0.739	-0.748	-0.759	-0.774	-0.804	0.045
20	-0.258	-0.326	-0.433	-0.561	-0.639	-0.681	-0.710	-0.732	-0.755	-0.783	-0.833	0.027
30	-0.257	-0.320	-0.398	-0.492	-0.581	-0.646	-0.694	-0.735	-0.776	-0.823	0.110	0.013
40	0.289	0.388	0.361	0.306	0.240	0.179	0.130	0.094	0.066	0.042	0.022	0.002
50	0.246	0.217	0.183	0.143	0.094	0.040	-0.010	-0.047	-0.068	-0.070	-0.050	-0.006
60	0.248	0.228	0.207	0.182	0.152	0.111	0.059	-0.000	-0.053	-0.084	-0.080	-0.013
70	0.249	0.243	0.237	0.230	0.222	0.214	0.204	0.192	0.178	0.164	0.164	0.235
80	0.251	0.259	0.267	0.274	0.282	0.289	0.296	0.303	0.310	0.322	0.355	0.475
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.255	0.290	0.318	0.337	0.349	0.355	0.355	0.353	0.349	0.349	0.369	0.477
110	0.256	0.303	0.337	0.357	0.367	0.370	0.368	0.364	0.360	0.361	0.383	0.481
120	0.258	0.316	0.354	0.373	0.382	0.385	0.384	0.382	0.382	0.390	0.419	0.489
130	-0.267	0.663	0.655	0.650	0.640	0.627	0.611	0.592	0.572	0.550	0.527	0.503
140	-0.240	-0.176	-0.148	-0.142	-0.149	-0.162	-0.179	-0.201	-0.227	-0.262	-0.321	0.529
150	-0.239	-0.170	-0.144	-0.141	-0.149	-0.162	-0.177	-0.193	-0.211	-0.232	-0.260	0.590
160	-0.238	-0.167	-0.148	-0.151	-0.161	-0.174	-0.188	-0.201	-0.213	-0.225	-0.237	-0.249
170	-0.236	-0.167	-0.162	-0.173	-0.185	-0.197	-0.207	-0.215	-0.221	-0.226	-0.224	-0.120
180	-0.033	-0.173	-0.206	-0.219	-0.226	-0.230	-0.232	-0.233	-0.231	-0.227	-0.212	-0.071

DOUBLE COUPLE

AZM												
10	-0.312	-0.459	-0.481	-0.490	-0.496	-0.501	-0.506	-0.512	-0.519	-0.532	-0.563	0.278
20	-0.293	-0.442	-0.473	-0.488	-0.498	-0.506	-0.515	-0.525	-0.538	-0.561	-0.608	0.269
30	-0.267	-0.374	-0.436	-0.475	-0.504	-0.530	-0.555	-0.582	-0.614	0.349	0.305	0.255
40	-0.232	-0.114	-0.052	-0.014	0.014	0.040	0.066	0.094	0.125	0.160	0.201	0.243
50	-0.191	-0.039	-0.014	-0.001	0.009	0.018	0.028	0.041	0.058	0.086	0.138	0.234
60	-0.149	-0.020	-0.006	0.002	0.008	0.014	0.020	0.029	0.041	0.062	0.108	0.226
70	0.483	0.490	0.499	0.504	0.508	0.512	0.518	0.525	0.535	0.553	0.594	0.724
80	0.449	0.497	0.502	0.505	0.509	0.513	0.517	0.523	0.533	0.549	0.588	0.722
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.567	0.511	0.510	0.511	0.514	0.517	0.522	0.528	0.538	0.557	0.599	0.725
110	0.648	0.527	0.520	0.519	0.521	0.525	0.531	0.539	0.552	0.575	0.623	0.731
120	0.722	0.595	0.565	0.558	0.559	0.565	0.575	0.590	0.611	0.642	0.686	0.742
130	0.772	-0.112	-0.074	-0.061	-0.058	-0.060	-0.066	-0.077	-0.095	-0.123	0.829	0.759
140	0.801	-0.052	-0.030	-0.023	-0.020	-0.019	-0.020	-0.022	-0.027	-0.037	-0.066	0.789
150	0.818	-0.039	-0.021	-0.015	-0.012	-0.010	-0.010	-0.010	-0.011	-0.014	-0.024	0.854
160	0.825	-0.034	-0.018	-0.012	-0.008	-0.006	-0.005	-0.004	-0.003	-0.002	-0.001	-0.001
170	0.826	-0.033	-0.017	-0.010	-0.006	-0.004	-0.002	0.001	0.003	0.007	0.016	0.123
180	0.821	-0.035	-0.017	-0.010	-0.005	-0.002	0.002	0.005	0.010	0.017	0.035	0.174

TABLE 7

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 120.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	88.3	74.8	63.1	53.8	46.7	41.3	37.4	34.5	32.5	31.1	30.3	30.0

MODIFIED SINGLE COUPLE

AZM												
10	-0.253	-0.281	-0.414	-0.688	-0.726	-0.740	-0.751	-0.760	-0.772	-0.790	-0.828	0.031
20	-0.254	-0.290	-0.346	-0.465	-0.611	-0.682	-0.720	-0.747	-0.773	-0.806	-0.863	0.019
30	-0.255	-0.293	-0.339	-0.437	-0.510	-0.623	-0.704	-0.762	-0.813	0.135	0.076	0.009
40	0.250	0.248	0.243	0.230	0.201	0.147	0.081	0.034	0.011	0.001	-0.001	-0.000
50	0.249	0.239	0.227	0.213	0.194	0.165	0.118	0.047	-0.022	-0.056	-0.050	-0.007
60	0.250	0.246	0.242	0.237	0.232	0.227	0.221	0.213	0.203	0.194	0.194	0.241
70	0.251	0.255	0.259	0.264	0.269	0.275	0.281	0.289	0.299	0.317	0.358	0.477
80	0.252	0.265	0.277	0.289	0.299	0.308	0.315	0.320	0.324	0.332	0.360	0.476
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.254	0.284	0.310	0.329	0.341	0.347	0.350	0.348	0.346	0.347	0.368	0.477
110	0.255	0.293	0.323	0.343	0.355	0.360	0.361	0.359	0.357	0.359	0.384	0.481
120	0.256	0.303	0.338	0.360	0.373	0.379	0.382	0.384	0.387	0.399	0.429	0.491
130	-0.245	-0.206	-0.184	-0.178	-0.184	-0.199	-0.222	-0.253	-0.292	0.656	0.590	0.510
140	-0.243	-0.193	-0.164	-0.153	-0.154	-0.161	-0.173	-0.189	-0.209	-0.233	-0.272	0.563
150	-0.242	-0.188	-0.160	-0.152	-0.154	-0.162	-0.174	-0.187	-0.202	-0.217	-0.232	-0.248
160	-0.241	-0.185	-0.161	-0.157	-0.163	-0.173	-0.183	-0.195	-0.205	-0.213	-0.215	-0.109
170	-0.240	-0.179	-0.166	-0.171	-0.180	-0.190	-0.199	-0.207	-0.212	-0.214	-0.204	-0.068
180	-0.021	-0.138	-0.183	-0.202	-0.212	-0.218	-0.221	-0.222	-0.221	-0.214	-0.191	-0.046

DOUBLE COUPLE

AZM												
10	0.217	0.070	0.035	0.019	0.009	0.000	-0.007	-0.016	-0.028	-0.046	-0.087	0.790
20	-0.272	-0.390	-0.442	-0.470	-0.490	-0.506	-0.522	-0.540	-0.563	-0.597	0.348	0.255
30	-0.252	-0.250	-0.250	-0.250	-0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.247
40	-0.229	-0.094	-0.044	-0.018	0.001	0.017	0.034	0.053	0.078	0.113	0.166	0.236
50	0.310	0.456	0.482	0.495	0.504	0.512	0.521	0.532	0.547	0.572	0.622	0.735
60	0.338	0.474	0.491	0.499	0.505	0.511	0.517	0.525	0.537	0.556	0.600	0.726
70	0.376	0.485	0.496	0.502	0.506	0.511	0.516	0.523	0.532	0.550	0.589	0.722
80	0.426	0.494	0.500	0.504	0.508	0.512	0.516	0.522	0.531	0.548	0.586	0.721
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.605	0.517	0.513	0.513	0.516	0.519	0.524	0.530	0.541	0.560	0.603	0.726
110	0.697	0.553	0.535	0.531	0.531	0.535	0.540	0.550	0.564	0.589	0.639	0.735
120	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.749
130	0.779	-0.087	-0.052	-0.039	-0.033	-0.031	-0.031	-0.034	-0.040	-0.054	-0.091	0.777
140	0.796	-0.058	-0.032	-0.022	-0.017	-0.015	-0.013	-0.013	-0.014	-0.017	-0.028	0.841
150	0.804	-0.049	-0.026	-0.017	-0.012	-0.009	-0.007	-0.005	-0.004	-0.002	-0.001	-0.001
160	0.806	-0.046	-0.024	-0.015	-0.010	-0.006	-0.003	-0.001	0.002	0.007	0.016	0.125
170	0.804	-0.048	-0.024	-0.014	-0.009	-0.004	-0.001	0.003	0.008	0.016	0.033	0.174
180	0.797	-0.054	-0.027	-0.015	-0.008	-0.003	0.003	0.008	0.015	0.027	0.054	0.200

TABLE 8

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 130.0

DIP= / SLIP=	89 / 88.8	81 / 79.4	73 / 70.8	65 / 63.3	57 / 57.0	49 / 52.0	41 / 48.0	33 / 45.0	25 / 42.8	17 / 41.3	9 / 40.4	1 / 40.0
AZM				MODIFIED SINGLE COUPLE								
10	-0.251	-0.258	-0.274	-0.710	-0.750	-0.760	-0.768	-0.777	-0.790	-0.811	-0.856	0.022
20	-0.252	-0.272	-0.299	-0.351	-0.508	-0.678	-0.736	-0.769	-0.800	-0.838	0.104	0.013
30	-0.254	-0.288	-0.325	-0.370	-0.433	-0.549	0.289	0.188	0.128	0.083	0.043	0.005
40	0.250	0.252	0.253	0.253	0.249	0.236	0.200	0.111	0.014	-0.019	-0.017	-0.002
50	0.250	0.250	0.250	0.250	0.250	0.250	0.249	0.249	0.249	0.249	0.249	0.250
60	0.251	0.255	0.259	0.264	0.269	0.275	0.282	0.292	0.305	0.327	0.373	0.482
70	0.251	0.261	0.271	0.280	0.289	0.298	0.305	0.312	0.320	0.333	0.366	0.478
80	0.252	0.268	0.283	0.296	0.307	0.316	0.322	0.326	0.329	0.336	0.362	0.476
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.254	0.281	0.305	0.323	0.336	0.343	0.346	0.346	0.344	0.346	0.367	0.477
110	0.254	0.288	0.315	0.335	0.347	0.354	0.356	0.356	0.355	0.359	0.385	0.482
120	0.256	0.298	0.332	0.356	0.373	0.384	0.392	0.400	0.409	0.425	0.452	0.494
130	-0.245	-0.209	-0.183	-0.170	-0.167	-0.172	-0.183	-0.199	-0.222	-0.256	-0.313	0.532
140	-0.244	-0.203	-0.175	-0.161	-0.158	-0.161	-0.169	-0.181	-0.195	-0.211	-0.229	-0.248
150	-0.244	-0.200	-0.172	-0.160	-0.159	-0.163	-0.171	-0.182	-0.193	-0.203	-0.206	-0.091
160	-0.243	-0.196	-0.170	-0.162	-0.164	-0.171	-0.179	-0.188	-0.196	-0.201	-0.194	-0.060
170	-0.241	-0.188	-0.169	-0.169	-0.175	-0.183	-0.191	-0.198	-0.202	-0.200	-0.182	-0.044
180	-0.014	-0.108	-0.157	-0.182	-0.196	-0.204	-0.209	-0.210	-0.208	-0.198	-0.168	-0.032
AZM				DOUBLE COUPLE								
10	0.229	0.135	0.056	0.031	0.015	0.002	-0.010	-0.024	-0.042	-0.069	-0.120	0.772
20	0.246	0.180	0.124	0.076	0.033	-0.005	-0.042	-0.079	-0.117	0.843	0.801	0.762
30	0.264	0.326	0.385	0.435	0.478	0.516	0.553	0.589	0.626	0.665	0.705	0.749
40	0.280	0.415	0.459	0.481	0.496	0.509	0.522	0.537	0.557	0.588	0.641	0.737
50	0.301	0.451	0.478	0.491	0.500	0.508	0.516	0.526	0.540	0.562	0.609	0.729
60	0.326	0.469	0.487	0.496	0.502	0.508	0.514	0.522	0.533	0.551	0.592	0.723
70	0.358	0.480	0.493	0.499	0.504	0.509	0.514	0.521	0.530	0.546	0.585	0.720
80	0.406	0.490	0.498	0.503	0.507	0.511	0.515	0.521	0.530	0.546	0.584	0.720
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.645	0.525	0.518	0.517	0.519	0.522	0.526	0.533	0.544	0.564	0.609	0.728
110	0.729	0.612	0.574	0.561	0.558	0.560	0.566	0.577	0.595	0.623	0.671	0.740
120	0.765	0.861	-0.093	-0.072	-0.062	-0.058	-0.059	-0.064	-0.075	-0.097	0.856	0.764
130	0.783	-0.077	-0.044	-0.030	-0.024	-0.020	-0.018	-0.017	-0.018	-0.022	-0.036	0.824
140	0.792	-0.061	-0.033	-0.022	-0.016	-0.012	-0.009	-0.007	-0.005	-0.003	-0.002	-0.001
150	0.796	-0.057	-0.030	-0.019	-0.013	-0.008	-0.005	-0.002	0.002	0.007	0.017	0.129
160	0.795	-0.057	-0.029	-0.018	-0.011	-0.006	-0.002	0.002	0.007	0.015	0.032	0.174
170	0.790	-0.063	-0.032	-0.019	-0.011	-0.005	0.000	0.006	0.013	0.024	0.050	0.198
180	0.782	-0.076	-0.039	-0.022	-0.012	-0.004	0.004	0.012	0.022	0.039	0.076	0.215

TABLE 9

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 140.0

DIP= / SLIP=	89 / 89.2	81 / 82.5	73 / 76.2	65 / 70.5	57 / 65.4	49 / 61.2	41 / 57.7	33 / 54.9	25 / 52.7	17 / 51.3	9 / 50.3	1 / 50.0
AZM				MODIFIED SINGLE COUPLE								
10	-0.250	-0.246	-0.237	-0.159	-0.820	-0.798	-0.797	-0.803	-0.816	-0.840	0.111	0.015
20	-0.252	-0.264	-0.278	-0.296	-0.329	-0.537	-0.772	-0.814	-0.847	0.115	0.066	0.008
30	0.276	0.432	0.438	0.449	0.450	0.441	0.404	0.200	0.051	0.021	0.009	0.001
40	0.251	0.257	0.264	0.271	0.279	0.289	0.300	0.313	0.330	0.348	0.359	0.277
50	0.251	0.257	0.264	0.271	0.278	0.287	0.297	0.310	0.327	0.353	0.401	0.487
60	0.251	0.261	0.270	0.279	0.288	0.297	0.306	0.315	0.326	0.342	0.380	0.482
70	0.252	0.265	0.278	0.290	0.301	0.310	0.317	0.323	0.328	0.338	0.369	0.478
80	0.252	0.270	0.286	0.301	0.312	0.321	0.327	0.330	0.332	0.338	0.363	0.476
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	0.253	0.279	0.302	0.320	0.332	0.340	0.343	0.344	0.343	0.345	0.367	0.477
110	0.254	0.284	0.310	0.329	0.342	0.350	0.354	0.355	0.355	0.361	0.389	0.483
120	-0.251	-0.257	-0.267	-0.282	0.700	0.680	0.656	0.631	0.602	0.571	0.539	0.504
130	-0.246	-0.213	-0.188	-0.173	-0.166	-0.165	-0.170	-0.179	-0.193	-0.209	-0.228	-0.247
140	-0.245	-0.210	-0.184	-0.168	-0.162	-0.162	-0.166	-0.174	-0.184	-0.194	-0.194	-0.070
150	-0.245	-0.207	-0.181	-0.167	-0.162	-0.164	-0.169	-0.176	-0.184	-0.189	-0.181	-0.049
160	-0.244	-0.204	-0.178	-0.167	-0.165	-0.168	-0.174	-0.181	-0.186	-0.187	-0.171	-0.039
170	-0.243	-0.194	-0.171	-0.166	-0.169	-0.175	-0.182	-0.187	-0.189	-0.185	-0.159	-0.030
180	-0.010	-0.081	-0.129	-0.157	-0.175	-0.186	-0.192	-0.193	-0.190	-0.178	-0.141	-0.022
AZM				DOUBLE COUPLE								
10	0.238	0.149	0.091	0.054	0.028	0.005	-0.016	-0.038	-0.066	-0.103	0.841	0.763
20	0.251	0.250	0.250	0.250	0.250	0.251	0.750	0.750	0.750	0.750	0.750	0.751
30	0.266	0.362	0.420	0.456	0.482	0.504	0.526	0.549	0.577	0.615	0.669	0.741
40	0.281	0.420	0.461	0.481	0.494	0.505	0.516	0.528	0.545	0.571	0.622	0.732
50	0.298	0.448	0.476	0.489	0.498	0.505	0.513	0.522	0.534	0.554	0.598	0.726
60	0.318	0.464	0.484	0.494	0.500	0.506	0.512	0.519	0.529	0.546	0.586	0.721
70	0.343	0.476	0.490	0.497	0.503	0.507	0.512	0.519	0.528	0.543	0.580	0.718
80	0.386	0.487	0.496	0.501	0.505	0.509	0.514	0.520	0.529	0.544	0.581	0.719
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.683	0.542	0.527	0.524	0.524	0.527	0.532	0.539	0.551	0.573	0.619	0.731
110	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
120	0.775	-0.099	-0.058	-0.041	-0.032	-0.027	-0.025	-0.024	-0.025	-0.031	-0.052	0.802
130	0.786	-0.072	-0.039	-0.026	-0.019	-0.014	-0.011	-0.008	-0.006	-0.004	-0.002	-0.001
140	0.790	-0.064	-0.034	-0.022	-0.014	-0.010	-0.006	-0.002	0.002	0.007	0.018	0.135
150	0.791	-0.063	-0.033	-0.020	-0.013	-0.008	-0.003	0.002	0.007	0.015	0.033	0.175
160	0.788	-0.068	-0.035	-0.021	-0.013	-0.006	-0.001	0.005	0.012	0.023	0.048	0.196
170	0.782	-0.079	-0.041	-0.024	-0.014	-0.006	0.002	0.009	0.019	0.034	0.068	0.212
180	0.773	-0.101	-0.054	-0.031	-0.017	-0.005	0.005	0.017	0.031	0.054	0.101	0.225

TABLE 10

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 150.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	89.4	84.8	80.4	76.3	72.5	69.3	66.5	64.2	62.4	61.1	60.3	60.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.249	-0.240	-0.225	-0.185	-0.045	-0.896	-0.858	-0.853	-0.862	-0.886	0.072	0.009
20		-0.252	-0.270	-0.286	-0.302	-0.316	-0.321	0.727	0.008	0.042	0.034	0.019	0.002
30		0.253	0.273	0.294	0.315	0.338	0.362	0.389	0.419	0.454	0.498	0.568	0.721
40		0.251	0.262	0.273	0.284	0.297	0.310	0.325	0.343	0.365	0.393	0.435	0.492
50		0.251	0.262	0.273	0.284	0.295	0.306	0.317	0.328	0.341	0.361	0.401	0.487
60		0.252	0.265	0.278	0.290	0.301	0.310	0.319	0.326	0.334	0.347	0.381	0.482
70		0.252	0.268	0.283	0.297	0.308	0.317	0.324	0.329	0.333	0.341	0.369	0.478
80		0.252	0.271	0.289	0.304	0.316	0.324	0.330	0.333	0.334	0.339	0.363	0.476
90		0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100		0.253	0.278	0.300	0.317	0.330	0.337	0.341	0.342	0.342	0.345	0.367	0.477
110		0.254	0.282	0.307	0.326	0.340	0.349	0.355	0.358	0.362	0.371	0.402	0.486
120		-0.247	-0.220	-0.198	-0.183	-0.174	-0.171	-0.174	-0.181	-0.193	-0.208	-0.227	-0.247
130		-0.246	-0.217	-0.193	-0.177	-0.167	-0.164	-0.165	-0.170	-0.177	-0.184	-0.178	-0.050
140		-0.246	-0.215	-0.191	-0.174	-0.166	-0.163	-0.165	-0.169	-0.175	-0.178	-0.166	-0.038
150		-0.246	-0.213	-0.188	-0.173	-0.165	-0.164	-0.166	-0.171	-0.175	-0.175	-0.157	-0.032
160		-0.245	-0.210	-0.184	-0.170	-0.165	-0.165	-0.168	-0.172	-0.175	-0.172	-0.147	-0.027
170		-0.244	-0.198	-0.173	-0.163	-0.162	-0.165	-0.170	-0.173	-0.173	-0.164	-0.131	-0.021
180		-0.006	-0.057	-0.097	-0.126	-0.145	-0.159	-0.166	-0.169	-0.165	-0.149	-0.108	-0.015
AZM					DOUBLE COUPLE								
10		0.245	0.199	0.153	0.108	0.061	0.015	-0.031	-0.076	-0.119	0.838	0.796	0.756
20		0.257	0.303	0.351	0.399	0.446	0.493	0.538	0.582	0.625	0.666	0.706	0.746
30		0.269	0.382	0.435	0.464	0.484	0.500	0.516	0.533	0.555	0.587	0.642	0.736
40		0.283	0.423	0.462	0.480	0.492	0.502	0.512	0.522	0.537	0.560	0.607	0.728
50		0.296	0.445	0.474	0.487	0.496	0.503	0.510	0.518	0.529	0.548	0.589	0.722
60		0.312	0.460	0.482	0.492	0.498	0.504	0.510	0.517	0.526	0.542	0.579	0.718
70		0.331	0.471	0.488	0.495	0.501	0.506	0.511	0.517	0.525	0.540	0.575	0.716
80		0.366	0.483	0.494	0.500	0.504	0.508	0.513	0.518	0.527	0.542	0.577	0.717
90		0.561	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100		0.719	0.583	0.553	0.543	0.541	0.542	0.547	0.555	0.569	0.594	0.643	0.736
110		0.767	0.868	-0.085	-0.062	-0.050	-0.044	-0.041	-0.041	-0.046	-0.058	-0.093	0.777
120		0.782	-0.080	-0.044	-0.029	-0.021	-0.016	-0.012	-0.009	-0.006	-0.004	-0.002	-0.001
130		0.788	-0.068	-0.036	-0.023	-0.015	-0.010	-0.006	-0.002	0.002	0.008	0.021	0.145
140		0.789	-0.066	-0.034	-0.021	-0.014	-0.008	-0.003	0.002	0.007	0.015	0.034	0.178
150		0.787	-0.069	-0.036	-0.022	-0.013	-0.007	-0.001	0.004	0.011	0.022	0.047	0.196
160		0.782	-0.078	-0.041	-0.024	-0.014	-0.006	0.001	0.008	0.017	0.031	0.063	0.209
170		0.775	-0.096	-0.051	-0.030	-0.017	-0.007	0.003	0.013	0.026	0.045	0.088	0.222
180		0.766	0.870	-0.076	-0.045	-0.024	-0.008	0.008	0.024	0.045	0.075	0.130	0.233

TABLE 11

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 160.0

	DIP=	89	81	73	65	57	49	41	33	25	17	9	1
	SLIP=	89.6	86.7	83.9	81.3	78.8	76.6	74.6	73.0	71.7	70.8	70.2	70.0
AZM					MODIFIED SINGLE COUPLE								
10		-0.249	-0.241	-0.230	-0.212	-0.177	-0.115	-0.040	-0.991	0.028	0.028	0.018	0.002
20		0.258	0.321	0.375	0.419	0.456	0.488	0.520	0.553	0.589	0.632	0.684	0.742
30		0.252	0.270	0.287	0.305	0.324	0.344	0.365	0.387	0.411	0.437	0.465	0.496
40		0.252	0.266	0.280	0.294	0.308	0.321	0.334	0.347	0.362	0.384	0.422	0.490
50		0.252	0.267	0.281	0.294	0.306	0.317	0.326	0.335	0.344	0.360	0.396	0.485
60		0.252	0.268	0.284	0.297	0.309	0.319	0.326	0.332	0.337	0.348	0.380	0.481
70		0.252	0.270	0.287	0.302	0.314	0.323	0.329	0.332	0.335	0.342	0.369	0.478
80		0.253	0.273	0.291	0.306	0.318	0.327	0.332	0.334	0.336	0.340	0.364	0.476
90		0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100		0.253	0.277	0.298	0.315	0.327	0.336	0.340	0.341	0.341	0.345	0.368	0.477
110		-0.247	-0.224	-0.205	-0.190	-0.181	-0.177	-0.178	-0.184	-0.195	-0.209	-0.227	-0.247
120		-0.247	-0.221	-0.200	-0.183	-0.172	-0.166	-0.164	-0.166	-0.170	-0.172	-0.158	-0.035
130		-0.247	-0.220	-0.198	-0.181	-0.171	-0.165	-0.163	-0.165	-0.168	-0.168	-0.150	-0.030
140		-0.246	-0.219	-0.197	-0.180	-0.170	-0.164	-0.163	-0.165	-0.167	-0.165	-0.143	-0.026
150		-0.246	-0.218	-0.195	-0.178	-0.168	-0.164	-0.163	-0.164	-0.165	-0.160	-0.134	-0.023
160		-0.246	-0.214	-0.190	-0.174	-0.165	-0.161	-0.161	-0.161	-0.160	-0.152	-0.120	-0.018
170		-0.244	-0.202	-0.173	-0.158	-0.152	-0.151	-0.152	-0.153	-0.149	-0.136	-0.099	-0.014
180		-0.003	-0.033	-0.059	-0.082	-0.100	-0.114	-0.122	-0.125	-0.120	-0.103	-0.068	-0.008
AZM					DOUBLE COUPLE								
10		0.250	0.250	0.250	0.250	0.250	0.250	0.750	0.750	0.750	0.750	0.750	0.750
20		0.261	0.340	0.397	0.437	0.467	0.493	0.518	0.544	0.575	0.615	0.669	0.741
30		0.273	0.395	0.444	0.469	0.485	0.498	0.511	0.524	0.542	0.569	0.621	0.732
40		0.284	0.425	0.463	0.480	0.491	0.500	0.508	0.518	0.530	0.551	0.594	0.724
50		0.295	0.443	0.473	0.486	0.494	0.501	0.508	0.515	0.525	0.542	0.579	0.718
60		0.306	0.455	0.479	0.490	0.496	0.502	0.508	0.514	0.523	0.537	0.572	0.714
70		0.320	0.465	0.484	0.493	0.499	0.503	0.508	0.514	0.522	0.536	0.569	0.713
80		0.346	0.477	0.491	0.497	0.502	0.506	0.511	0.516	0.524	0.538	0.572	0.714
90		0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100		0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750	0.750
110		0.780	-0.085	-0.047	-0.032	-0.023	-0.017	-0.013	-0.010	-0.007	-0.005	-0.002	-0.001
120		0.788	-0.068	-0.036	-0.023	-0.015	-0.010	-0.005	-0.001	0.004	0.010	0.025	0.158
130		0.789	-0.065	-0.034	-0.021	-0.013	-0.007	-0.002	0.002	0.008	0.017	0.037	0.183
140		0.788	-0.068	-0.035	-0.021	-0.013	-0.006	-0.001	0.005	0.012	0.023	0.048	0.197
150		0.783	-0.075	-0.039	-0.023	-0.013	-0.006	0.001	0.007	0.016	0.030	0.060	0.208
160		0.777	-0.089	-0.047	-0.028	-0.016	-0.006	0.002	0.011	0.022	0.040	0.079	0.218
170		0.769	-0.116	-0.065	-0.038	-0.021	-0.008	0.005	0.018	0.035	0.060	0.110	0.229
180		0.760	0.835	-0.109	-0.069	-0.038	-0.012	0.012	0.038	0.069	0.109	0.165	0.239

TABLE 12

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 170.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	89.8	88.4	87.0	85.7	84.5	83.4	82.4	81.6	80.9	80.4	80.1	80.0
AZM					MODIFIED SINGLE COUPLE							
10	0.304	0.479	0.528	0.563	0.592	0.618	0.642	0.665	0.687	0.707	0.728	0.747
20	0.253	0.280	0.307	0.333	0.358	0.383	0.407	0.429	0.450	0.469	0.485	0.498
30	0.252	0.271	0.290	0.308	0.324	0.339	0.353	0.366	0.382	0.403	0.438	0.492
40	0.252	0.270	0.287	0.302	0.315	0.327	0.337	0.345	0.355	0.372	0.408	0.488
50	0.252	0.270	0.287	0.302	0.314	0.324	0.332	0.338	0.344	0.356	0.389	0.484
60	0.252	0.271	0.289	0.304	0.316	0.325	0.331	0.335	0.339	0.347	0.376	0.480
70	0.253	0.272	0.291	0.306	0.318	0.327	0.332	0.335	0.337	0.343	0.368	0.478
80	0.253	0.274	0.293	0.309	0.321	0.329	0.334	0.336	0.337	0.340	0.364	0.476
90	0.253	0.275	0.294	0.311	0.323	0.331	0.335	0.337	0.337	0.340	0.362	0.475
100	-0.247	-0.227	-0.209	-0.195	-0.186	-0.181	-0.181	-0.186	-0.196	-0.210	-0.227	-0.246
110	-0.247	-0.224	-0.204	-0.187	-0.175	-0.168	-0.164	-0.164	-0.164	-0.163	-0.142	-0.027
120	-0.247	-0.224	-0.203	-0.187	-0.175	-0.167	-0.164	-0.163	-0.163	-0.161	-0.138	-0.025
130	-0.247	-0.224	-0.203	-0.186	-0.175	-0.167	-0.163	-0.162	-0.162	-0.158	-0.133	-0.023
140	-0.247	-0.223	-0.202	-0.186	-0.174	-0.166	-0.163	-0.161	-0.159	-0.153	-0.124	-0.020
150	-0.247	-0.222	-0.200	-0.183	-0.171	-0.164	-0.159	-0.157	-0.153	-0.143	-0.111	-0.016
160	-0.246	-0.218	-0.194	-0.176	-0.163	-0.155	-0.150	-0.146	-0.140	-0.126	-0.091	-0.012
170	-0.245	-0.204	-0.172	-0.150	-0.137	-0.128	-0.123	-0.118	-0.110	-0.093	-0.061	-0.007
180	-0.000	-0.005	-0.010	-0.014	-0.018	-0.022	-0.024	-0.025	-0.023	-0.019	-0.011	-0.001
AZM					DOUBLE COUPLE							
10	0.255	0.295	0.337	0.381	0.428	0.478	0.528	0.577	0.623	0.666	0.706	0.745
20	0.266	0.365	0.421	0.453	0.475	0.493	0.510	0.529	0.552	0.585	0.640	0.736
30	0.275	0.405	0.450	0.471	0.485	0.497	0.507	0.518	0.533	0.556	0.603	0.727
40	0.285	0.427	0.463	0.480	0.490	0.498	0.506	0.514	0.525	0.543	0.582	0.720
50	0.293	0.441	0.471	0.484	0.492	0.499	0.505	0.512	0.521	0.536	0.570	0.714
60	0.302	0.451	0.476	0.487	0.494	0.500	0.505	0.511	0.519	0.533	0.564	0.710
70	0.311	0.458	0.480	0.490	0.496	0.501	0.506	0.511	0.519	0.531	0.561	0.708
80	0.326	0.468	0.486	0.493	0.499	0.503	0.508	0.513	0.521	0.533	0.564	0.710
90	0.501	0.503	0.505	0.507	0.510	0.514	0.518	0.524	0.534	0.550	0.590	0.722
100	0.778	-0.088	-0.050	-0.033	-0.024	-0.018	-0.014	-0.010	-0.007	-0.005	-0.003	-0.001
110	0.791	-0.063	-0.033	-0.020	-0.013	-0.008	-0.003	0.002	0.007	0.015	0.033	0.175
120	0.793	-0.060	-0.031	-0.019	-0.011	-0.006	-0.001	0.004	0.010	0.020	0.042	0.190
130	0.791	-0.063	-0.032	-0.019	-0.011	-0.005	0.000	0.006	0.013	0.024	0.050	0.199
140	0.787	-0.069	-0.036	-0.021	-0.012	-0.005	0.001	0.008	0.016	0.029	0.060	0.207
150	0.781	-0.081	-0.042	-0.025	-0.014	-0.005	0.002	0.011	0.021	0.037	0.074	0.216
160	0.773	-0.102	-0.055	-0.032	-0.018	-0.006	0.004	0.015	0.029	0.051	0.097	0.225
170	0.764	0.861	-0.083	-0.050	-0.028	-0.010	0.008	0.026	0.048	0.081	0.136	0.235
180	0.755	0.794	0.835	-0.121	-0.074	-0.025	0.025	0.074	0.121	0.165	0.206	0.245

TABLE 13

LEFT LATERAL REVERSE FAULT, DIP DIRECTION DIFFERENCE = 180.0

DIP=	89	81	73	65	57	49	41	33	25	17	9	1
SLIP=	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0	90.0
AZM					MODIFIED SINGLE COUPLE							
10	0.256	0.299	0.338	0.371	0.399	0.422	0.441	0.457	0.471	0.483	0.492	0.499
20	0.253	0.279	0.303	0.324	0.342	0.356	0.368	0.379	0.392	0.411	0.443	0.493
30	0.253	0.274	0.295	0.312	0.326	0.337	0.346	0.353	0.362	0.377	0.413	0.488
40	0.253	0.273	0.292	0.308	0.321	0.331	0.338	0.343	0.348	0.360	0.393	0.484
50	0.253	0.273	0.292	0.308	0.320	0.329	0.335	0.339	0.342	0.350	0.380	0.481
60	0.253	0.274	0.293	0.309	0.321	0.329	0.335	0.337	0.339	0.345	0.371	0.478
70	0.253	0.274	0.294	0.310	0.322	0.330	0.335	0.337	0.338	0.342	0.366	0.477
80	0.253	0.275	0.294	0.310	0.323	0.331	0.335	0.337	0.337	0.340	0.363	0.475
90	-0.247	-0.225	-0.206	-0.189	-0.177	-0.169	-0.165	-0.163	-0.163	-0.160	-0.138	-0.025
100	-0.247	-0.225	-0.206	-0.190	-0.177	-0.169	-0.165	-0.163	-0.163	-0.160	-0.137	-0.025
110	-0.247	-0.226	-0.206	-0.190	-0.178	-0.170	-0.165	-0.163	-0.162	-0.158	-0.134	-0.023
120	-0.247	-0.226	-0.207	-0.191	-0.179	-0.171	-0.165	-0.163	-0.161	-0.155	-0.129	-0.022
130	-0.247	-0.227	-0.208	-0.192	-0.180	-0.171	-0.165	-0.161	-0.158	-0.150	-0.120	-0.019
140	-0.247	-0.227	-0.208	-0.192	-0.179	-0.169	-0.162	-0.157	-0.152	-0.140	-0.107	-0.016
150	-0.247	-0.226	-0.205	-0.188	-0.174	-0.163	-0.154	-0.147	-0.138	-0.123	-0.087	-0.012
160	-0.247	-0.221	-0.197	-0.176	-0.158	-0.144	-0.132	-0.121	-0.108	-0.089	-0.057	-0.007
170	-0.244	-0.201	-0.162	-0.129	-0.101	-0.078	-0.059	-0.043	-0.029	-0.017	-0.008	-0.001
180	0.289	0.251	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.251
AZM					DOUBLE COUPLE							
10	0.260	0.332	0.388	0.428	0.460	0.487	0.513	0.540	0.572	0.612	0.668	0.740
20	0.269	0.383	0.435	0.462	0.479	0.493	0.507	0.521	0.538	0.565	0.617	0.731
30	0.278	0.412	0.454	0.474	0.486	0.496	0.504	0.514	0.526	0.546	0.588	0.722
40	0.286	0.429	0.464	0.479	0.489	0.497	0.503	0.511	0.521	0.536	0.571	0.714
50	0.292	0.439	0.470	0.483	0.491	0.497	0.503	0.509	0.517	0.530	0.561	0.708
60	0.297	0.446	0.473	0.485	0.492	0.497	0.503	0.508	0.515	0.527	0.554	0.703
70	0.301	0.450	0.475	0.486	0.492	0.498	0.502	0.508	0.514	0.525	0.550	0.699
80	0.303	0.452	0.476	0.486	0.493	0.498	0.502	0.507	0.514	0.524	0.548	0.697
90	0.007	-0.003	-0.000	0.003	0.006	0.009	0.014	0.019	0.027	0.042	0.077	0.219
100	0.803	-0.048	-0.024	-0.014	-0.007	-0.002	0.002	0.007	0.014	0.024	0.048	0.197
110	0.801	-0.050	-0.025	-0.014	-0.008	-0.002	0.002	0.008	0.014	0.025	0.050	0.199
120	0.797	-0.054	-0.027	-0.015	-0.008	-0.003	0.003	0.008	0.015	0.027	0.054	0.203
130	0.792	-0.061	-0.030	-0.017	-0.009	-0.003	0.003	0.009	0.017	0.030	0.061	0.208
140	0.786	-0.071	-0.036	-0.021	-0.011	-0.003	0.003	0.011	0.021	0.036	0.071	0.214
150	0.778	-0.088	-0.046	-0.026	-0.014	-0.004	0.004	0.014	0.026	0.046	0.088	0.222
160	0.769	-0.117	-0.065	-0.038	-0.021	-0.007	0.007	0.021	0.038	0.065	0.117	0.231
170	0.760	0.832	-0.112	-0.072	-0.040	-0.013	0.013	0.040	0.072	0.112	0.168	0.240
180	0.750	0.750	0.750	0.750	0.750	0.750	0.250	0.250	0.250	0.250	0.250	0.250

TABLE 14

from the strike is 62°. We find in table 9 the value of $\phi_R - \phi_L$ for the above parameters of 17°, 130° and 60° respectively. The value is 0.327 for the modified single couple and 0.551 for the double couple. Values corresponding more precisely to the given parameters may be obtained by interpolation.

If plane b is the actual fault, the motion is left-lateral normal, the dip angle is 78°, and the azimuth to Pasadena from the strike is 194°. According to the relations described in the Introduction, the value of $\phi_R - \phi_L$ for left-lateral normal motion at an azimuth 194° differs by 0.5 circle from that at −14° (= 346°) for right-lateral normal motion. The value corresponding to right-lateral normal motion is the same as that corresponding to left-lateral reverse motion for which the table gives the

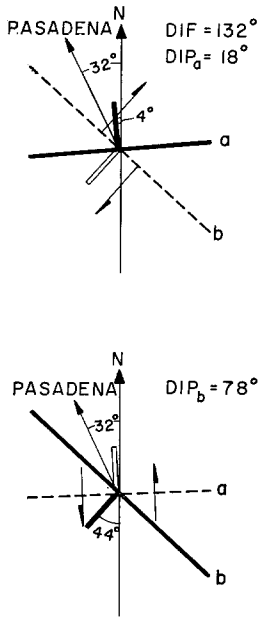

FIG. 2. Fault plane solutions of shock M3 of Part 2. DIF indicates the difference in dip direction between plane a and b. DIP indicates the dip angle of each plane. The horizontal projection of the motion direction is indicated by pairs of arrows.

value. Therefore, the value of $\phi_R - \phi_L$ for the given fault motion at an azimuth 194° differs by 0.50 from that at 346° for left-lateral reverse motion. The latter value may be obtained according to the conjugate relation described before from the value at an azimuth of 166° (= 346 − 180). Taking the dip direction difference 130°, we get from table 9 the value of $\phi_R - \phi_L$ corresponding to dip angle of 78° and azimuth of 166° as −0.183 for the modified single couple and −0.049 for the double couple by interpolation.

Then, the conjugate relation gives the corresponding values at 346° as 0.183 and 0.049. Finally, the values for the given fault motion are obtained as 0.683 and 0.549 by adding 0.50 to the above values. The value corresponding to the double couple model should be the same for plane a and plane b. The values obtained are 0.551 and 0.549, and show agreement within the error of interpolation.

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